

Academic Tribes and Territories

Intellectual enquiry and the
culture of disciplines

SECOND EDITION

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Preface to the First Edition

This book began with a mild obsession. In 1959, I read – and, in common with a number of others, was profoundly irritated by – C.P. Snow's *The Two Cultures and the Scientific Revolution* (1959). Having myself been trained in philosophy, I took the view then, as I do now, that it offered a superficial and conceptually flawed polarization between the worlds of the sciences and the humanities. That experience triggered off a concern to establish that there are many more numerous and more subtle boundaries than Snow's polemic allowed within the world of scholarly enquiry, and many bridges across what he chose to depict as a grand canyon of the intellect.

It was not, however, until a further 20 years had passed that I found a way to develop more actively my interest in mapping the variegated territory of academic knowledge and in exploring the diverse characteristics of those who inhabit and cultivate it. If I owe the physicist who wrote *The Two Cultures* the debt of making me think about the question, I owe the anthropologist Clifford Geertz, more than anyone else, the inspiration of how to get to grips with it. It was his unpublished paper, 'Towards an ethnography of the disciplines' (Geertz 1976, partly reproduced in Geertz 1983), that set me off on the investigation on which the present study is based.

Having once identified the means, the opportunity followed closely. I am beholden to the University of Sussex, where I was by then teaching, for giving me 9 months' study leave in 1980, and to the University of California for awarding me a Visiting Fellowship to the Center for Studies in Higher Education at its Berkeley campus for 3 of those months. I was able during that period to undertake a substantial part of the fieldwork for my investigation. I was not, however, in a position to follow it up more than sporadically for the subsequent 6 years, until another period of study leave and another Visiting Fellowship to Berkeley allowed me to complete my data collection and to do a great deal of relevant background reading. The wide range of sources listed in my bibliography is a tribute to the excellence of the University of California's multi-campus library system. During both periods of active research, I was also indebted to the Nuffield Foundation for awards

under its Social Sciences Small Grants Scheme which contributed towards the costs of travel, typing and other research expenses. In the intervening years, two colleagues in particular – Burton R. Clark of the University of California at Los Angeles and Eskil Björklund of the Swedish National Board of Universities and Colleges – encouraged me to develop my emergent ideas and sponsored me to write about them. Their support helped significantly to sustain my commitment to the enterprise.

I have always found dialogue a more congenial mode than soliloquy of generating and shaping ideas, so I am in the habit of asking the more indulgent and long-suffering of my friends to comment on the drafts of most of what I write. On this occasion, no less than 10 of them were prevailed upon to read critically through the whole of the book in draft: Michael Black, Roger Blin-Stoyle, Barry Cooper, Mary Henkel, Eric Hewton, Dorothy Jerrome, Robert Murray, Trevor Pateman, Sheldon Rothblatt and Martin Trow. Their comments, individually and collectively, led not only to numerous improvements in style and clarity but also to my recognition that a sizeable part of the original text needed to be jettisoned and another substantial element restructured. I am deeply grateful to them for the trouble they took and the help they gave me – and so ought any reader to be, for a much improved exposition.

The plan of the book, as it now exists, differs significantly from the one I had in mind when I first embarked on my systematic study of the cultures of academic disciplines. At the time, I saw myself as putting together a series of perhaps six to a dozen different ethnographic accounts, each attempting to portray those who worked in a particular field and the particular field they worked in. But as the enquiry proceeded and the piles of data accumulated, it became clear that some of the most interesting features of the investigation lay in the comparisons and contrasts between different groups, and that the process of marking these demanded an analytic approach, as against successive portrayal.

The decision to focus on recurrent and apparently significant themes across disciplines brought a major change in its wake. When the key issues began to emerge and to become more clearly identifiable, it was obvious that my data were not sufficiently exhaustive to allow me to pronounce on every theme with equal conviction or with comparably persuasive supporting evidence. This was especially the case when I came to consider in detail those aspects relating to the nature of knowledge, as against those concerned with the workings of the academic community. To do the argument proper justice, it was clear that I could not rely on my own field material alone, but would have to draw extensively on the research findings of others.

In consequence, my exposition now rests on a combination of two main categories of testimony: that drawn from my first-hand enquiries into different disciplines, and that which derives at second hand from a diversity of written sources. I hope I have made the distinctions between them evident enough in the process of quoting them: but the reader will soon be as aware as I am that the balance between the two shifts quite markedly from

place to place in the text. The interview material comes most strongly into its own in Chapters 4, 5, 6 and 8; Chapters 1, 2, 3 and 7 call more extensively on the relevant research literature. The majority of previous enquiry has focused on the natural sciences (on my rough estimate, science-related investigations outnumber by about two to one those in the humanities, social sciences and applied fields taken together). A subsidiary consequence is that they also seem at times to dominate my account. I have tried as far as I can to offset this bias, but the material available has not always allowed me to do so.

For those with a taste for methodological issues, the way in which I collected my field data and the longer-term research implications of the study are reviewed in the Appendix. Here it is only necessary to mention that I built up my understanding of the different subjects in my chosen sample by asking practitioners in each of the relevant fields to share with me their own ideas, perceptions and experiences. Altogether, I interviewed just over 220 academics, spanning 12 disciplines and 18 institutions in two countries (Britain and the USA). I owe my largest debt of all to those colleagues, for so willingly giving their time and so generously contributing their thoughts to my enquiry.

Tony Becher

Preface to the Second Edition

The invitation to prepare a second edition of what is now a well-established text provided an opportunity to reflect on over a decade of profound changes in higher education across the world and to consider their implications for the academic tribes and their disciplinary territories. As we comment in Chapter 1, during the late 1980s and 1990s there were major geomorphic shifts in the landscape on which those territories lie. One of the tasks we set ourselves in preparing this new edition was to take into account the adaptations of the academic tribes to these environmental changes: adaptations made sometimes reluctantly, occasionally enthusiastically and often unconsciously. Another was to integrate some of the latest research on the academic professions into the account, while a third was to interrogate some of the assumptions underpinning the original research with a view to assessing their robustness in this changing environment.

Clark overstates the thesis of the first edition of this book when he characterizes it as arguing that bodies of knowledge 'determine the behavior of individuals and departments' (Clark 1997: 24). Such determinism is certainly very far from our current position. The changes in the HE system worldwide have meant a growth in the strength and number of forces acting on academic cultures, enhancing the externalist rather than internalist character of the influences on them. The activities of the evaluative state, the slide to performativity and the need to 'chase the dollar' are just three examples of factors that have meant important changes in academic practices and attitudes worldwide. The decline in donnish dominion (Halsey 1992) has meant a parallel decline in the significance of disciplinary knowledge as a force.

Meanwhile changes to the higher education system, the internal character of universities and to the very meaning of higher education have resulted in a highly differentiated, more permeable, system in which close engagement with the disciplinary knowledge core through research is only one academic activity among very many. For a good proportion of academics it is not a significant aspect of their work at all. The idea of the ivory

tower, still current in popular discourse, will today elicit a wry smile from almost every faculty member everywhere.

As if to reinforce this change of emphasis, theorizing about the ways in which recurrent practices, values and attitudes are shaped and articulated has shifted focus, partly under the influence of broader intellectual trends. The post-structuralist spotlight on the significance on agency and discourse in social construction has shone more brightly over the past two decades, including – though less frequently than elsewhere – into HE institutions as research sites (Trowler 1998a; Prichard 1999). The way we conceptualize knowledge or, better, knowledgability, is itself touched by this way of seeing: epistemological forms are themselves subject to social interpretation and construction and so the complexity and mutuality of causality becomes apparent.

This shift has been augmented by the new attention paid to micro-social processes in developing quite localized meaning systems and practices (Gherardi 2000). Viewed from this perspective it becomes quite perilous to make generalizing statements about practices among academics in particular specialisms.

The emphasis on the epistemological in social construction has thus been squeezed from two directions: by real-world changes and by theoretical shifts. Like academics themselves, whose claims to exceptionalism no longer find a sympathetic audience in the contemporary context of postmodern delegitimation, the ‘special’ significance of disciplinary knowledge has been diminished. It has not disappeared though; it remains a significant factor to be taken into account in attempting to understand the academic profession, albeit one which needs to be understood in a slightly different way than was once the case.

The book remains an enquiry into the nature of the linkages between academic cultures (the ‘tribes’) and disciplinary knowledge (their ‘territories’) and so excludes detailed discussion of other influential factors in conditioning faculty cultures in higher education. However, we wanted to consider how far the relative importance of epistemological factors affecting cultures had changed over time. Given that there has been considerable diversification of higher education since the mid-1980s we also wanted to introduce more material from lower status institutions and disciplines than was present in the first edition, no longer relying so heavily on the transferability of conclusions derived from the study of an elite group.

In all of this, however, we had no intention of writing a completely new book, and hence of losing the insights and the use of data that had made the first edition so successful. While Paul Trowler took most of the responsibility for preparing the new material, he was conscious of the strengths in the original work and the quality of the prose in which it was presented. Revisions have been careful, therefore, and apart from a completely new first chapter are largely confined within the original structure of the book. Where appropriate, we have included many new references to the research literature after 1989, and deleted some of those that stretched back for

more than a generation: however, we have retained most of the original citations on the grounds that they provided an important part of the database for the original text. We hope that, far from fundamentally changing – or worse, damaging – the original, we have retained its qualities while updating and adding something new to it, which readers will find valuable.

There are some new names to add to those to whom we owe a debt. They include John Skelton at Open University Press for his continuing enthusiasm and support for our work, and to Emma Sangster at the SRHE whose careful and thorough preparation of the statistics on staff and students in the UK was invaluable in updating the book. Finally there is the debt to our families, who by now are only too well aware of the consequences of engagement in this sort of project.

Paul Trowler and Tony Becher

1

Landscapes, Tribal Territories and Academic Cultures

HE in the post-industrial environment

The first edition of this book, published over a decade ago, mapped the territory of academic knowledge at the time and traced the links between the academic disciplines into which that knowledge had coalesced and the cultures of the academics engaged in them. Since then there have been major shifts in the topography of academic knowledge and more significantly, in the very landscape in which it lies: not only in higher education (HE) institutions and systems at the national and international level but also in the socio-economic contexts within which they operate. We can describe these shifts as structural in the sense that, as they occur, there are changes in long-standing sets of practices in different locales among the academic tribes which are the concern of this book. Structures have the characteristics of both rules and resources (Giddens 1984) and, as we shall see below, there have been important developments in various aspects of both in recent years.

This chapter begins by tracing the nature of the fundamental, geomorphic, changes in HE, and goes on to provide an initial overview of the implications for the academic tribes and their territories, setting the scene for our closer re-mapping of academic knowledge and cultures in later chapters. As in the first edition, the main focus is on HE in the UK and USA, though we argue (with Neave and van Vught 1991; Dill and Sporn 1995; Slaughter and Leslie 1997 and others) that it is possible to discern international convergence in many of the trends we identify in this chapter, at least in the developed world.

Cameron and Tschirhart (1992) have described the new HE system as operating in a post-industrial environment characterized by turbulent change, information overload, competitiveness, uncertainty and, sometimes, organizational decline. For HE institutions this has meant high levels of competition, scarce resources and new associated costs, as well as unpredictable fluctuations in enrolments and revenues. For academics it has sometimes

meant the need to search for new, positive identities and new roles in which to find refuge from the storm of change (Henkel 2000: 136). The term 'post-industrial' also points to broader socio-economic changes, which have important impacts on HE: the shift of economic character in the developed world that will see, for example, a loss of 10–15 million manufacturing jobs in the USA in the first decade of the twenty-first century, with predictable social consequences (Tierney 1999: 6). Below we draw on a range of literature to explore the following set of interrelated changes in the characteristics of HE associated with post-industrialism: globalization; 'massification'; altered HE-state-industry relations; marketized relationships; managerialism within universities; and, finally, substantive disciplinary growth.

The globalized landscape

Globalization is a term with contested meanings (Cole 1998; Urry 1998: 5). Here we understand it to refer to the development of global flows of information and resources along networks transcending nation-states' influence and disturbing nationally-organized systems and practices. Such networks intimately connect the local and the global and may have any combination of physical, social and economic characteristics. International transport systems exemplify the first of these, while the internet and SuperJanet, its academic sub-network, as well as the increasingly global invisible colleges (Crane 1972) of academics exemplify the second, social globalization. The fact that a scientific discovery in a university in one country will be exploited to make a technical advance by a company based in another and put into production in yet another country, chosen for its low labour costs and offered for sale by that company's subsidiaries throughout the world illustrates economic globalization. The term is also used to refer to 'virtual' globalization: that sense of the global which comes to inform personal identities, perspectives and everyday practices (Baudrillard 1985; Kumar 1997).

The globalized landscape has fundamental consequences for HE. It is creating new patterns of incentives and disincentives, new opportunities and dangers, new structures and constraints. Slaughter and Leslie argue that 'the changes taking place currently are as great as the changes in academic labor which occurred during the last quarter of the nineteenth century' (1997: 1) and this is probably not an exaggeration. They identify four consequences of globalization for universities:

1. financial constraint by the state on discretionary activities such as HE, necessitated by fierce international competition
2. the growing centrality to HE of technoscience associated with international markets
3. tightening relationships between governments and multinationals related to product development and innovation

4. increased focus on global intellectual property strategies within multinationals and established industrial countries, representing a new environment for university research

(Slaughter and Leslie 1997: 36–7)

The globalization of HE has seen growing convergence between the UK and USA as well as among other countries in the areas of science and technology policy, access, finance and university autonomy. In each country there is more rapid technology transfer, increased movement of products and processes from the university to the market, a blurring of the boundaries between public and private sectors of HE and a greater emphasis on applied science in universities. In each country the HE curriculum is becoming more vocationally-oriented while at the same time an expanded HE system means more opportunities for access for lower status groups.

Meanwhile HE is acquiring a 'borderless' (CVCP/HEFCE 2000) character in other senses: ones related to the 'market' for students. Traditional universities seem likely to be threatened by global 'mega-universities', such as the University of Phoenix (USA) and the Open University (UK). Eleven such institutions accounted for nearly 3 million students in the mid-1990s (Daniel 1996: 10). They are characterized by their capacity to deliver distance teaching at degree level to large numbers of students. Increasingly they employ new 'knowledge media' (Eisenstadt and Vincent 1999), which allow the dynamic creation, accessing and sharing of knowledge on a global scale. The ability to offer the whole curriculum through these new technologies, rather than simply small chunks of it, is more cost effective both for institutions and for students, giving the mega-universities a strong global market position. In the longer term the influence of knowledge media may be even more radical: 'Some claim . . . that the knowledge media created by the convergence of computing, telecommunications and the cognitive sciences change fundamentally the relationship between people and knowledge' (Daniel 1996: 17).

For some authors the internationalization of their provision will be crucial for universities to retain their competitive position in the future (Lee 1999).¹ Brian Fender, chief executive of HEFCE, noted that 'We are all aware of the development in the US and elsewhere of major virtual and corporate universities' (Goddard 2000: 6). Others, however, remain more sanguine about the threat posed by global 'e-universities' (Thompson 2000). Certainly it seems unlikely that the more extreme visions of globalized HE will be realized: the national rather than global nature of legal systems, professional accreditation in health care and other areas and the localized nature and appeal of some knowledge forms will ensure that this is the case. Reports of the imminent demise of physical universities are likewise premature (at the very least). Though Levine worries about the death of HE as we know it, asking 'if we can do all of these things electronically, why does higher education any longer need the physical plant called a campus?' (Levine 1997: 16), other authors present good reasons why the future will not be so

different from the past. Brown and Duguid for example note that 'obituaries are now regularly written not just for tools, but for well-established practices, organizations, and institutions [including universities], not all of which seem to be fading away' (Brown and Duguid 2000: 3). For these authors, specialists in the social dimension of new technologies, the obituary writers are too concerned about information and overlook the social context which helps people understand what that information means and why it matters:

envisioned change will not happen or will not be fruitful until people look beyond the simplicities of information and individuals to the complexities of learning, knowledge, judgement, communities, organizations and institutions. That way, it seems more likely that change will reorganize the higher education system, rather than simply disorganizing it.

(Brown and Duguid 2000: 213)

The phenomenon of massification

Despite its flaws, Martin Trow's (1970) classic formulation of HE systems as having an elite, mass or universal character is much cited in HE research. According to this categorization the British HE system became a 'mass' one in 1988 when its age participation index surpassed 15 per cent, while the American system passed the 40 per cent barrier to become a 'universal' system in the mid-1960s (Trow 1972). The UK system, in the late 1990s, was stable in the lower 30 per cent area, its move towards 'universality' having been at least temporarily halted.

Qualitatively and quantitatively, however, both systems have been transformed during the past decade. There were 1.8 million HE students in the UK in 1998 (HESA 1999) and 14.3 million in 1997 in the USA (NCES 1999). There has been an increase in enrolments of around 13 per cent per decade in the USA for the past 20 years and a much bigger jump in the UK: a 91 per cent increase in the number of first-year enrolments between 1982 and 1992 for example (DfE 1994), though that rate of growth subsequently slowed. This has meant an increase, though not proportional, in the number of academic staff in the system: a total of 128 000 in the UK in 1997/8 (HESA 1999) and 1 150 000 in the USA in 1995 (NCES 1999), as against around 100 000 in the UK and 800 000 in the USA in 1976.

Meanwhile the composition of both students and staff has changed. In the late 1990s compared with a decade earlier HE students in both countries are more likely to: be female (53 per cent in 1998 in the UK and 56 per cent in the USA in 1997); come from minority ethnic groups (10 per cent classified as black or Asian in the UK and 27 per cent in the USA in 1997/8); and be older (59 per cent over 21 in the UK and 58 per cent in the USA in 1998).

As a result of changing demographic characteristics students are likely to be less well prepared for HE than was the case, and this has meant adaptation of the curriculum and the provision of more and better support services for them. Meanwhile academic staff are more likely to have come from professions outside academia and more likely to be involved in vocational subjects and new disciplines and domains of knowledge, partly because of the disciplinary dignification and programme affiliation that accompanies massification (see below and Chapter 7).

Looking at the two countries' systems as a whole, it is clear that while externally subject to globalization they have become internally increasingly diversified and diffused (Teichler 1988; Clark 1995). The American system has always been more diversified than its UK counterpart, with a large number of institutions having overlapping functions but distinctive missions and different academic standards. That system includes the highly prestigious 'Ivy League' private universities as well as less prestigious public universities and two-year colleges, each with its own cultural configurations and associated sets of rewards and frustrations for academic staff (Clark 1987b). The de-regulatory HE policies of UK governments in the late 1980s and early 1990s have had the effect of making the UK system more like a 'frog pond' of competing institutions rather than the 'separate campuses of the University of the United Kingdom', as Trow puts it (1987). Diffusion in HE encompasses the blurring of boundaries between HE and other education sectors, between HE knowledge and demotic knowledge and the intellectually 'downward' trajectory of teaching and learning in some parts of the system: 'dumbing down' as it is popularly known. Such characteristics are typical of post-industrialism more generally: the shifting boundaries and relativization of knowledge-claims, social status and different areas of social life (Bloland 1995).

Finally a shift in the perceived purposes of HE has accompanied its massification. In both the USA and UK there has been an increasing emphasis in government policy and rhetoric on the vocational functions of HE, in terms both of its role in supplying qualified students for the professions, industry and commerce and in terms of its research function. This has meant the de-emphasizing of its other roles, those concerned with the general development of individuals' minds and capabilities, contributing culturally to the community and enhancing knowledge and understanding for their own sakes rather than for utilitarian ends. In the UK this priority is as clear in the Labour government White Papers such as *Learning to Succeed* (DfEE 1999) as it was in the Conservative White Papers of the 1980s, for example *Higher Education: Meeting the Challenge* (DES 1987). The attack on academic staff control of the 'products' and processes of HE, 'producer capture' so-called, and the instrumentalist view of HE as the servant of business remain at the forefront of policy developments. For Ron Barnett (1997, 2000) this 'slide to performativity' clearly represents not just a shift in the HE curriculum towards operational competence as opposed to academic competence but a fundamental shift in power relations in terms of

who defines what counts as useful knowledge and whose discourses achieve dominance.

The regulatory state

The expansion of HE towards a mass system and beyond has demanded a steadily growing proportion of public expenditure. According to Dearing (1997) there was a 45 per cent increase in expenditure on HE in the UK in the 20 years to 1996. With that has come increasing state concern with 'quality' and a consequent intervention in the affairs of universities. As the British Quality Assurance Agency puts it:

When the HE system was small and largely uniform, and made a relatively small claim on public funds, reliance upon implicit, shared assumptions and informal networks and procedures [for quality assurance] may have been possible, and sufficient. But with the rapid expansion of numbers of students and institutions, the associated broadening of the purposes of HE, and the considerable increase in the amount of public money required, more methodical approaches have had to be employed.

(QAA 1998: 6–7)

As a result there has been an increase in accountability and an emphasis on efficiency and economy with, at the same time, a loss of the exceptional status and individual autonomy of HE. The Research Transparency Exercise in the UK entails a further extension of surveillance and accountability, requiring universities to quantify the amount of time their staff spend on different types of activity. Small wonder, then, that HE researchers have begun to refer to the 'evaluative' or 'supervisory' state (Neave 1997; Sporn 1999).

This change is compounded by a drastic cut in funding for students: Dearing's (1997) estimated 45 per cent increase in total expenditure incorporated a 40 per cent reduction in expenditure per student over the 20-year period 1976–1996, a figure with which other analysts broadly agree (Brookman 1992; Watson 1996; Williams 1996). Meanwhile staff salaries have seen a relative decline and academic posts have been less likely to be securely provided on a long-term basis: Halsey (1992) notes a reduction in those academics with salaries wholly protected by university finance from 84 per cent in 1970 to 77 per cent in 1980. In the UK the 1988 Education Reform Act breached academic tenure and 1992 saw an end to the self-regulation of universities. Popularly interpreted as a 'promotion' for the polytechnics, the abolition of the binary divide in 1992 was a way of leveling down rather than of raising the playing field (Trow 1992: 214; Slaughter and Leslie 1997: 43). As state funds have begun to dry up, universities have had to search elsewhere for income, so that between 1980 and 1991 in the UK the percentage of university funding from private sources increased from 10 per cent to 20 per cent in 1991 (Williams 1995: 181). Increasingly

too there has been an emphasis on a 'bid and deliver' system of public funding in the UK, which has seen financial allocations tied to tightly specified performance (Martin and Irvine 1992), this being one aspect of the application of new managerialism in HE (Deem 1998).

Meanwhile in the USA much the same picture obtains, with governmental intervention increasing and per capita funding declining. At the State level there has been increasing intervention, with numerous states implementing policies designed to regulate academic quality. In Federal government there have been debates leading to the creation of State Post-secondary Review Entities (SPRES), characterized as inaugurating a new era of governmental control (Dill and Sporn 1995: 6). McGuinness (1995) has shown how the fiscal crisis which began in the USA in 1990 set the scene for the decade. Demand began seriously to outstrip resources, the state withdrawal from providing the major part of HE funding accelerated, and a variety of constraints began to affect universities. However the situation is not entirely new. According to the RAND Corporation the United States has been underfunding HE since the mid-1970s (1997: 10). Between 1987 and 1992 state appropriations per full-time student fell by 13 per cent (Quinn 1993: 51). Within a generation there will be a USA funding shortfall of US\$38 billion – almost a quarter of what it will then need (RAND 1997: 14).

The triple helix

In parallel with the state-HE developments there have been important changes involving the incursion of industry into state-university relations. The work of Michael Gibbons *et al.* (1994; 1997) is significant in depicting the dynamics of this change, though he uses sweeping strokes and a broad brush. Gibbons and his collaborators argue that private industry has been gaining the advantage over universities in technological development and exploitation, not only because of its ability to invest but because it is not restrained by now-outmoded disciplinary structures which make up 'mode 1' knowledge. Increasingly science involves 'mode 2', transdisciplinary, problem-oriented knowledge, the characteristics of which are that:

- knowledge is produced in the context of application
- transdisciplinarity is the norm
- heterogeneity and organizational diversity are common
- there is enhanced social accountability
- there is a more broadly based system of quality control

This second knowledge mode is considered extremely important for institutional communities of academics.

Mode 2 does more than assemble a diverse range of specialists to work in teams on problems in a complex applications-oriented environment. To qualify as a specific form of knowledge production, it is essential that

enquiry be guided by specifiable consensus as to appropriate cognitive and social practice. In Mode 2, the consensus is conditioned by the context of application and evolves with it. The determinants of a potential solution involve the integration of different skills in a framework of action, but the consensual form it takes may be only temporary, depending on how well it conforms to the requirements set by the specific context of application (Gibbons 1997: 94).

Although the 'natural' home of mode 2 knowledge appears to lie outside the university, Etzkowitz and Leydesdorff (1997) offer hope to academics. They refer to the 'triple helix' of academia-industry-government relations, which they see as a key component of any national or multinational innovation strategy in the late twentieth and early twenty-first centuries. In the contemporary context innovations are increasingly likely to develop holistically rather than in a linear fashion, to involve this triple helix, to be transnational and interdisciplinary. There is co-evolution of technologies and organizations. As a result the system as a whole is developing and university research is evolving in ways that will incorporate it as part of the technoscience knowledge-production loop. Turpin and Garrett-Jones (1997) show that universities are tending to develop formal commercial arms which are increasingly likely to evolve into loosely knit organizational networks, largely unbound from their university and industrial antecedents. Clark's study of five entrepreneurial universities (1998) identifies the types of organizational change he believes necessary to adapt to this new environment. His five pathways of transformation involve (1) strengthening steering from the university's core; (2) expanding the developmental periphery; (3) diversifying the funding base; (4) stimulating the academic heartland; and (5) developing an integrated entrepreneurial culture.

Marketizing knowledge

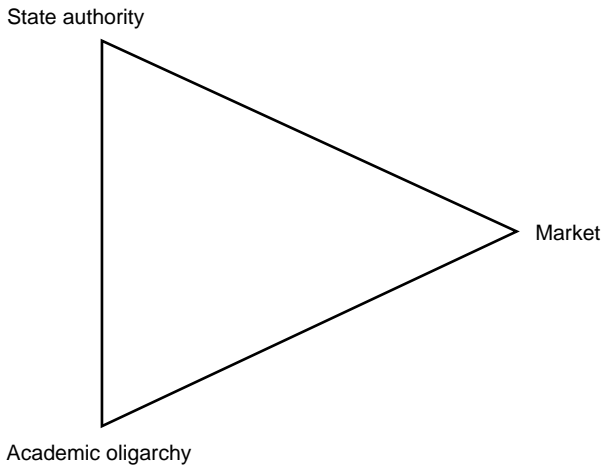
The marketized HE system is characterized by:

- deregulation of the system, reduction in the monopolistic position of universities and a threat of new rivals, including private industry and information technology on a global scale
- increased power of 'customers': students, employers and the government acting as a core buyer
- increased rivalry among competitors

(Dill and Sporn 1995)

In 1983 Burton Clark helpfully portrayed the main sources of control in HE in the USA, Europe and the UK as occupying different positions (see Figure 1.1). As noted above there has been a move in recent years in both the UK and the USA towards the market, or more accurately 'quasi-market' (Woods *et al.* 1996) point of this triangle:

Figure 1.1 Clark's continua of influence over higher education



Source: Clark 1983: 143

Policies and statutes [in the USA] moved from an ideology that defined the public interest as best served by shielding public entities from involvement in the market, to one that saw the public interest as best served by public organizations' involvement in commercial activities.

(Slaughter and Rhoades 1993: 287)

The UK universities have travelled a much longer distance than their US counterparts from an 'academic oligarchy' or 'collegial' character (Dill 1992; Eustace 1994; Dearlove 1999) towards a marketized system yet with considerable accompanying state intervention. British students have moved from being 'consumers in waiting' to fully-fledged consumers since the introduction of student fees in 1998. Their location within the 'largest single market in the world' (Sporn 1999), the European Union, means that students can move freely across a European HE network. There has been a discernible movement towards 'academic capitalism' (Slaughter and Leslie 1997) in which market-like behaviours become common at both the institutional and the academic staff level. Some, but by no means all, universities are becoming more entrepreneurial and less and less reliant on state grants. 'Chasing the dollar' (or the Euro) has become an increasingly important part of the academic's role in such institutions, at least in some disciplinary contexts and at some professional levels.

In the face of these pressures universities are required to 'develop more creative, adaptable, and efficient means of organizing academic work' (Dill and Sporn 1995: 16). Examples include the push to establish more sophisticated and well-managed organizations for the procurement, support and administration of contract research, reflecting the need to generate mode 2 rather than mode 1 knowledge in the attempt to stay competitive. There is

also growing pressure for better quality teaching and support services relevant to students. Universities are likely too to become wary about protecting their intellectual property, though Dill and Sporn argue that they will not close up entirely: the ideal of knowledge production for the public good is still extant in large parts of the system.

Meanwhile there is evidence that marketized relationships have led to the commodification of knowledge: its treatment, discursively at least, as a 'thing' capable of being bought and delivered in module-sized chunks, with learning outcomes being the unit of currency (Trowler 1998a, 1999). In such a context academic staff may be viewed as exchangeable deliverers of learning outcomes rather than as subject specialists with unique contributions to make. From a managerialist point of view such a trend can be seen to have very attractive characteristics.

Economy, efficiency and effectiveness

Managerialism involves a framework of values and beliefs about social arrangements and the distribution and ordering of resources. It provides a guide and justification for managers' and leaders' behaviour (Hartley 1983: 26–7) – behaviour that is oriented to efficiency, economy and market responsiveness and which calls for the direction of employee activities towards these ends by managers. Some of the key tenets of managerialism relevant to the current discussion include the following:

- there is a strong orientation towards the customer and the 'market', at least in the language used by managers
- there is an emphasis on the power of the top management team to bring about corporate change and its legitimate right to change cultures as well as structures and processes
- the management of change is seen primarily as a top-down activity, though 'neo-managerialism' involves steering at a distance through devolution of responsibility within strict parameters, careful monitoring of staff and cost centre outcomes and control through fostering internal competition
- in education, a conceptualization of knowledge and learning is adopted which is atomistic, mechanistic and explicit.

There are a number of variants of managerialism, including neo-Taylorism; the public service orientation; the public management approach; cultural approaches; competency approaches; 'new public management'; and 'new managerialism' (Pollitt 1993; Ball 1997). Each of these may be articulated in a 'hard' or 'soft' form (Trow 1994). The sources of managerialism are multiple too, with mixed origins in New Right ideology, management theory and elsewhere (Pollitt 1993; Fairley and Patterson 1995). Braun (1999) notes that two different managerialist models have been emerging across the countries studied in his research with colleagues: the client/market

model and the efficiency model. The latter is predominant in Germany, France, Italy and Switzerland while the former is more evident in the US, England and the Netherlands (Braun 1999: 248).

According to many writers on the English and North American systems there has been a move to what Hoggett calls post-bureaucratic control (Hoggett 1991: 244), a form of 'new public management'. Within university institutions this has meant the development of corporate strategies, strong central management teams, a proliferation of cross-institutional support units concerned with quality assurance, teaching and learning, staff development and so on. The result has been to shift the focus away from the academic department in terms of initiatives and to impose a greater scrutiny of the department's documents, practices and policies from the centre, including the appointment of committees to monitor departmental research activities and strategies (Patrick and Stanley 1996). Increasingly departments and academics are expected to meet corporately determined standards. This has important impacts on the distribution of power in universities: 'A senior administrator spoke of central audit giving him the authority to "open the black box" of academic decision making and to see to it that academics could justify the procedures (or lack of them) that they had' (Henkel 1997: 140).

However, this is moderated by an awareness of the need to balance academic strengths in departments against centralism: to avoid killing the goose that lays the golden eggs. Henkel found that, in the six UK universities her team studied (four chartered, two unchartered), all showed significant movement towards acting as a corporate enterprise in the context of a largely state-regulated market. This involved a – not-necessarily conscious – mix of bureaucratic and post-bureaucratic modes of management (Henkel 1997: 136). What such a change implies in practice is a form of 'centralized decentralization' (Hoggett 1991; Henkel 1997) in which there is a considerable degree of autonomy at the periphery, nonetheless within centrally-defined parameters designed to ensure careful 'steering at a distance' (Kickert 1991). This is achieved through objective-setting, the use of performance indicators, bid-and-deliver contracts and the monitoring of outcomes. Post-bureaucratic managerialism, then, is distinguished by its 'tight-loose' character (Ramsden 1998a), a pattern found not only within universities but also at the system level, hence Neave's (1997) comments about the 'offloading state'.

In the USA too, Rhoades (1997) shows how management prerogatives have grown and academic power has declined in US universities, though as he suggests (1997: 4): 'Many, if not most, faculty are unaware of the scope and significance of the restructuring that is going on in higher education . . . Many faculty still believe they are independent professionals. At least they act as such.'

For Rhoades, academics are not proletarianized: however they are nonetheless increasingly 'managed' professionals. Rightly, in our view, both he and Slaughter and Leslie (1997) portray this situation not as static nor as

part of an inevitable trend but as an ongoing negotiation of professional autonomy and managerial discretion. Professions are dynamically constructed (and deconstructed) in this way rather than having or lacking objective characteristics that bestow 'professionalism' on them, as early theory on the professions claimed. There is constant struggle over academics' terms of employment, so academic capitalism needs to be conceptualized as processual rather than static in nature:

knowledge, theory, expertise and altruism are not enough; organizational, political, and economic skills are equally, if not more, important... [It is necessary to focus on] active agency, particularly at their [professionals'] intervention in the political economy, to gain a greater degree of control over their work lives and income streams, through, for example, state licensure laws.

(Slaughter and Leslie 1997: 140)

The overall balance of operational discretion, though, has been consistently tipped towards managers in the USA in recent years, much as it has in the UK. Halsey (1992) writes about the 'humbling' of the academic profession and Ramsden talks about a 'shift from academics as professionals to academics as proletarians' (Ramsden 1998b: 351). Trowler (1998a) found important changes in the labour process of academics occurring at NewU (the acronym given to the post-1992 English university which was the locus of Trowler's ethnographic study). These included work intensification, degradation of working conditions, bureaucratization and power shifts towards managers and administrators. Slaughter and Leslie agree (1997: 40): 'Overall, the system lost autonomy because of major changes in governance structures, and professors lost many of their prerogatives with regard to control over their work.'

The situation appears to have been exacerbated in recent years by the managerialist applications of information technology. Rhoades (1997) finds more evidence for academic deskilling than for upskilling as a result of the application of ICT, with faculty being professionally marginalized in crucial decisions about whether, and how, to introduce and use educational technology. There is generally no contractual provision for such decisions and managers have been able to exploit this void so as to increase their span of control:

Instructional technologies are more than just new methods of delivering instruction. They are means by which managers can bypass full-time faculty's influence and claims on the curriculum... Managers are creating a curricular realm over which they have more discretion and control.

(Rhoades 1997: 265)

In another sense too IT applications are important in the academic world. Roderick Floud (1999) predicts that by 2002 the technology of surveillance will be so developed that it will be possible to quantify the cost of producing

a graduate in different universities and even in different university departments. Publishing such information and making decisions on the basis of it will have crucial political and policy implications as well as generating unintended consequences in terms of institutional and individual behaviour in HE.

Managerialism's three key aims are economy, efficiency and effectiveness, defined in particularly loaded ways. The pursuit of these has had a substantial, often painful, impact on academic communities. Far more than previously, academics are likely to find themselves 'overextended, underfocused, overstressed, underfunded' in the words of one North American university principal (Vest 1995, quoted in Clark 1998: 146). Academics are expected to work longer, on a greater variety of tasks with fewer resources. There has, in short, been an intensification and degradation of academic work. Rhoades reports that between 1987 and 1992 contact hours increased in every category of institution except liberal arts colleges (Rhoades 1997: 267). This trend over the 1990s is confirmed in data collected for the Faculty Surveys conducted by the Higher Education Research Institute at UCLA 1998–9 (Higher Education Research Institute 1991; Sax *et al.* 1999). McInnis (1996, 2000), reporting Australian data, notes that academics are nowadays working 2–3 hours longer per week on average than they did 15–20 years ago, and the longer hours are accounted for by non-core activities. These often involve searching for financial resources no longer provided by the state but achieved instead through consultancies, teaching on fee-paying summer schools, engaging in marketing activities and so on. Indeed, the search for resources is one of the most important contributing factors to their work intensification (McInnis 1996; Slaughter and Leslie 1997). McInnis's 1999 Australian survey data (McInnis 2000) showed that the percentage of academics satisfied with their job dropped from 67 per cent to 51 per cent between 1993 and 1999; those who felt stressed increased from 52 per cent to 56 per cent; 69 per cent said that academic support for students (largely related to the increased and changing student intake) was the main source of increased work hours with 55 per cent claiming a substantial increase in their working hours in that 5-year period. Though McInnis notes that the decline in academic work conditions, levels of satisfaction and career outlooks has been dramatic by any measure, he is at pains to counter the simplistic view that academics are all in the same boat. Diversity is a key characteristic of these changes. In the USA the situation also seems quite complex, with increasing levels of stress among academics mainly related to domestic and health issues (possibly a function of an aging faculty) with, at the same time, heightened levels of satisfaction with the overall 'climate' for faculty in higher education (Sax *et al.* 1999).

To generalize, deprofessionalization of academic life is clearly occurring, while traditional ideas about the special status and knowledge claims of academics have rapidly become outdated. Kerr (1989) is almost certainly right to point a cautionary finger at the experience of school teachers and the school system in both the USA and the UK. In the classroom, teachers

have experienced deskilling through the process of separating the conceptualization from the execution of lessons, increasing bureaucratization and managerialism, central control of the curriculum and extensive audit and control of their work. Meanwhile the use of league tables of pupil achievement and of financial efficiency, together with a whole range of other statistics, has had innumerable unintended consequences, many of them deleterious but most of them quite predictable. Callahan's (1962) historical account of the 'cult of efficiency' in the early years of this century in the USA would provide informative reading for many of today's HE policy makers and those HE managers impelled by managerialist ideology.

Patterns of growth and fragmentation

For Burton Clark (1996b) the growth in knowledge and the consequent explosive growth in disciplines and their fragmentation into sub-disciplines is probably the most important, but often-overlooked, change affecting HE in recent years, adding to its complexity and proving more powerful in its effects even than the system's 'massification' and marketization. Disciplinary growth can be measured by the number and types of departments in universities, the change and increase in types of HE courses, the proliferation of disciplinary associations, the explosion in the number of journals and articles published and the multiplication of recognized research topics and research clusters. A five-country study of graduate education and academic research (Clark 1993) found that the number and variety of disciplines, specialties, and inter- or multi-disciplinary subjects is on the increase everywhere, while the 1992 *Encyclopedia of Higher Education* (Clark and Neave 1992) reported a vast expansion in overall academic output (a point also discussed in Chapter 5). There are now over 1000 maths journals covering 62 major topic areas with 4500 subtopics. More academic works of history were published between 1960 and 1980 than in all previous time. Similarly in chemistry more articles were published in two years in the mid-1990s than in all the years prior to 1900. Overall there appears to be a growth in output of around 4–8 per cent annually in most branches of science.

A number of related processes are at work here, as Metzger (1987) shows (see also Chapter 7). Subject parturition means that new fields develop from older ones and gradually gain independence. These may develop from one discipline or a number. Examples of the latter would include many of the areas of study that developed in the 1970s and 1980s such as women's studies, race and ethnic studies, education studies, development studies and, more recently, Deaf studies. Such fields gradually develop distinctive methodological approaches, conceptual and theoretical frameworks and their own sets of internal schisms.

Subject dispersion also occurs, so that disciplinary areas grow, or are 'grown', to cover more ground. Meanwhile programme affiliation (the integration into university education of subjects such as law) and subject

dignification (increase of status and therefore acceptability within the academy) together mean that the notion of what is a 'suitable' subject for HE widens and new types of academic department and degree courses are created.

As well as growth there is also decline. Physics and chemistry in their pure forms have found it difficult to recruit students in recent years, partly as a result of changes to school syllabuses and weaknesses in the school system (Clark 1997; Henkel 2000). The response to such pressures in many universities has been the development of new domain-based degrees such as environmental sciences and sports sciences, which require less specialist knowledge and have greater market attraction.

Knowledge organization and expansion can operate in its 'well-muscled' organizational form independently of, and sometimes counter to, trends in the student market, managerialist imperatives, government policy and other structures. The resulting changes are largely internal to universities and can be very powerful. They comprise: 'a line of influence that has its own determinants and wide-ranging effects that shape higher education institutions from bottom to top' (Clark 1996b: 418).

For universities in straitened times disciplinary growth simultaneously offers the prospect of greater market attractiveness, promotion up the university status ladder and, more negatively, escalating costs and re-shaped internal patterns of power, influence and resource allocation.

As Clark (1993) contends there is structural differentiation and a closely related elaboration of academic professionalism within which academics 'specialize their interests and commitments in a widening array of subjects and institutions' (p. 266). He argues that the driving force behind this is the academics themselves who, in pursuing scholarship, differentiate organizational networks as well as ideas and literatures. Such a position could, however, be said to ignore the larger forces shaping academic institutions and academic life: those associated with post-industrialism and postmodernity which lie outside academics' immediate control as well as other 'externalist' forces discussed in this chapter. Clark's approach too, though helpful, is at a high level of analysis and so misses some of the detail of disciplinary differences in relation to the power of academics to mould the shape and content of their disciplines. The study of politics offers an example: 'Because political science is so deeply imbricated with political practice, its history as an organized body of social knowledge has been tied more than any other social science to situational conditions' (Katznelson 1997: 319).

Changing landscapes, shifting territories

These shifts in the landscape of HE have significant implications for academics, their various tribes and disciplinary territories. We will now delineate in general terms the most clearly apparent trends within academic life and work.

The impact of the geomorphic and territorial changes on academic staff has been substantial. However, the relationship between the identifiable shifts in the landscape on the one hand and academic cultures, work conditions and disciplinary communities on the other is dynamic, complex and far from tightly-coupled. The landscape metaphor turns out to be a particularly appropriate one: land exists without an observer, but landscape does not: the 'scape' is the projection of human consciousness, the way the land is perceived and responded to (Bowe *et al.* 1994). In the interaction of social structure and human agency lie the roots of the unpredictability of social life. It is important, then, to remember the role of agency in change: the important role of the reception, interpretation and implementation of new policies and responses to changing environments by academic staff themselves.

For some analysts (Henkel 1997; Trow 1989), in the face of the fundamental change in the transition from elite to mass HE and the simultaneous reshaping of state-public services, academics in general, and those in the UK in particular, are struggling to hold on to values and practices from the past. These include elite, or 'pre-modern' values and 'modes of specialisation, divisions of labour and institutional governance that stem from the dominance of the discipline in concepts of academic identity and professionalism' (Henkel 1997: 142). However responses to change are not usually so monochromatic. We can expect to see a variety of reactions from different groups of staff, and even from the same individuals and groups at different times. These will include not only negativity and resistance, or a burying of the academic head in the sand in the hope that things will change for the better, but the enthusiastic adoption of change in some cases and the strategic undermining and reworking of it in others.

For some the consequences of the above changes include deprofessionalization and loss of the bonds that once tied the academic 'community': a slippery term, as Hillery (1955) and Kogan (2000) demonstrate. Clark (1987a) sees differentiation and fragmentation as the third phase of an intellectual movement in American HE. In the first phase academics were hired hands. Around the 1870s a semi-integrated professionalism began to take root, located in the establishment of universities rather than colleges. Since 1945 there has been a greatly differentiated profession reflected in the night-and-day contrast between the research universities and community colleges. The same can be seen in the move from full-time to part-time work with part-time 'gypsy scholars' piecing together an academic livelihood. This has been accompanied by a shift from scholarship to teaching, where discipline matters much less and the job role becomes increasingly similar to that of secondary school teachers. There are large resulting differences in workload and orientation, while at the same time existing controls are 'thrown out of whack': 'If knowledge is power, then new knowledge is new power, expanded knowledge is expanded power, and fragmented knowledge is fragmented power' (Clark 1987a: 273). However according to Clark there are 'interlocking cultural communities' – a collective comprehensiveness

that is integrative despite the forces for specialization. The analytical handle here is the idea of integration through overlap (see also Chapter 4). Others agree that despite disciplinary fragmentation there are still unifying factors, sustained by intellectual exchange, which help to ensure that the centre of the academic community still holds (Kogan 2000).

It is clear that, taking a system-wide perspective, recent years have seen a diversification of the academic profession into even smaller and more different worlds than was previously the case: post-Fordist patterns of employment have led to fewer permanent jobs and greater diversity at the periphery (Henkel 1997; Rhoades 1997). Clark remarks on the elaboration of academic professionalism in the context of structural differentiation (Clark 1993), among whose consequences one can identify an increased rigidification of the division of labour, more varied conditions of employment, greater differentiation in staff contracts and roles and more tightly defined areas of responsibility. Academics are increasingly stratified, with more internal hierarchies and divisions stimulated by the need for managerial flexibility (though there are important shades and subtleties to all this).

These divisions are not just the short-term consequences of policies such as the UK Research Assessment Exercise: they are symptoms of more fundamental forces, including the fragmentation of research arising from both the greater emphasis on teaching needs in mass HE systems and the political imperatives of economy and efficiency (Clark 1991). The resulting pattern of change is an important issue for the central theme of this book. The rapidly changing disciplinary fundament, explored briefly above, has had dramatic effects on many of the longer-established as well as the newly-developed academic tribes in recent years.

For McInnis (1996), greater role specialization is an important means of mitigating the effects of work intensification and diversification. But it is also clear that from an individual's perspective there has been an extension, intensification and fragmentation of the job role, even for core academic tasks such as course design and delivery. The demands on permanent full-time academic staff have multiplied:

Academics find they must, for example, not only generate new courses; they must cost them, determine and stimulate markets for them, evolve new ways of delivering them and ensure they can stand up to hard external scrutiny. The stress on old assumptions about the nature and organisation of work are becoming more difficult to resist across the world.

(Henkel 1997: 139)

The impact of these extra tasks and the additional time they involve varies with the individual's academic rank (Slaughter and Leslie 1997) and the type of parent institution (Clark 1987a). For most academics, however, the cognitive consequence is far greater than it appears when measured simply in terms of the number of hours worked. As we saw above, surveys of academics in numerous countries suggest that they experience considerable psychological

pressure in their attempts to do more with less. Only 9 years after the publication of his book, Boyer's four scholarships of integration, discovery, application and teaching (Boyer 1990: 17–25) need to be supplemented by the 'scholarships' of leadership, management, administration and entrepreneurialism, which now form an inescapable part of the modern academic's agenda.

Maps of academic tribes and territories need to take this diversity into account and to incorporate the increasingly important category of part-time staff into the analysis. This is a group often excluded from accounts of faculty worlds, as they were by Bown and Schuster (1986) for example. Rhoades argues that part-time faculty have been sidelined in the literature and marginalized by full-time faculty in the contest over professional status: stereotypically they 'simply deliver instruction' (Rhoades 1997: 263). Their teaching is discredited in a number of ways (by omission, by not being acknowledged as professional experience, by not counting for salary/seniority calculations, etc). But in reality far from being a minor and marginal part of the system they are becoming central to its operation. In the UK in 1997–8, 14 per cent of academic staff were part-time (HESA 1999); the average figure for the USA in 1992 was already 27 per cent (Haas 1996: 344), though this has risen to as much as 50 per cent in public 2-year colleges (NCES 1999). As well as diversification in the terms of employment, there is greater diversity in the composition of academic staff. While Finkelstein *et al.* note that in the USA this diversity includes 'race/ethnicity [and] nativity' (1998: 17) this is less true in the UK (see Chapter 7).

We have already noted the diminished span of control that academics have over their work and environment (Halsey 1992; McInnis 1996, Rhoades 1997). Associated with this are the greater levels of surveillance and control of their work and their much greater accountability for what they do. They have autonomy still, its limits are ever more clearly defined and policed by the centre: both the centre of the institution and the political centre and agencies associated with it. There are other pressures on the academic community, too, related to the concern about intellectual property. The collegium has come under pressure as knowledge capital has increasingly been patented and protected by Industry Liaison Officers, acting as the guardians of university interests (Webster and Packer 1997), rather than as a freely available contribution to the public good.

However, the outlook is not wholly pessimistic when seen from the perspective of the academic tribes. While much of the writing in the field has addressed their diminishing span of influence and power as well as their declining status and rewards, it remains possible that the increasingly global character of knowledge media and the newly-acquired skills of universities in exploiting them will serve to strengthen the academic world and increase its span of influence. Nor should the pressures of massification and creeping managerialism be interpreted purely negatively. As Winter notes (1995: 130), new situations can present real opportunities to shed oppressive practices as well as to realize new possibilities. 'Contradictions not only generate

“problems” . . . they also generate spaces within which power can be contested and reforms can be won’: a point encapsulated in the Chinese symbol for ‘crisis’, which incorporates the signs for both threat and opportunity (Daniel 1996).

In the area of curriculum and teaching and learning, while subject review by the QAA in the UK has brought increased surveillance and accountability, with corresponding intensification of academics’ work, it has also had some positive effects, generating a collective conception of educational quality and better awareness of the importance to students of a coherent experience (Henkel 1997). Arguably it has also brought an increased sense of community in adversity: a sort of Dunkirk spirit among academics (Kogan, 2000). Mechanisms of audit and control have provided further benefits in terms of equal opportunities for academic staff. Gender regimes in universities have traditionally been profoundly unwelcoming to women and had allowed the unacknowledged exploitation of their work. Greater scrutiny and transparency through audit and assessment exercises have made this harder to bring about (Davies and Holloway 1995). Likewise the changing curricular structures, which have led to shifting borders and border territories in HE, have sometimes yielded positive outcomes for women and other previously marginalized or exploited groups (Deem 1996). If, as Henkel (2000: 180) argues, those who became academics in the 1980s and 1990s were effectively joining a different profession from those who joined in the 1960s and 1970s, it was not only or altogether a diminished one.

Levels of analysis

To see how these diverse aspects of cultural change relate to the rest of the book, it may be useful to conclude by giving some attention to the notion of levels of analysis in academic concerns. Becher and Kogan (1992) argue that HE systems typically comprise four distinct tiers: the central authorities; individual institutions; basic units and individuals. The central authorities include both governmental and quasi-autonomous bodies. Within individual universities are located several basic units. They are characterized as having academic responsibility for an identifiable course or group of courses, controlling their own operating budgets and exercising some element of choice in the recruitment of professional colleagues, and often also of students. The category ‘individuals’ incorporates both academic and non-academic staff, together with students.

This taxonomy may call for some modification in the light of the major recent changes noted above. In particular, the notion of a ‘central authority’ presupposes top-down control of universities by the state, while the trends are in practice contradictory. Alongside Neave’s (1998) ‘evaluative state’, we have already remarked on a strong tendency for HE to be subject to market forces which are not necessarily in conformity with government policies. A more useful designation of activities at this level might be in

terms of a loosely-defined national HE system, perhaps supplemented – in the light of the phenomenon of globalization – by an even more general level of HE worldwide. However this would still remain a very attenuated notion, given the major differences between provision in prosperous and penurious countries.

Along a different dimension, the chapters which follow identify various levels of cognitive activity, not only within broad disciplinary areas (see Chapter 2), but also in terms of individual disciplines (Chapter 3) and sub-disciplines and specialisms (Chapter 4). This pattern of cognitive features, especially at the level of disciplines and sub-disciplines, is matched by related social concerns in the academic community, reflecting the research interests of its members and, to a lesser extent, their teaching patterns as well. These are, though, subject to increasing pressures from marketization, developments in information technology and the range of other factors discussed above. The social concerns for academics can in their turn be seen as manifesting themselves at different levels, reflecting different intellectual and geographical boundaries: specialist and general international disciplinary affiliations, nationwide associations and more narrow departmentally-based groups.

These various frameworks – organizational, cognitive and social – can be seen to interact and at some points to interpenetrate, affecting the working lives of academics in different ways according to context. The importance of contextual considerations is often overlooked, but is – as subsequent chapters go on to argue – fundamental. Their significance is best brought out by the recognition that writings about HE, like academic activities themselves, are pitched at different levels of generality and specificity (Becher 1994).

At its most wide-ranging, HE research on what might be labelled the macro level focuses on system-wide issues, such as access studies and explorations of the labour market for graduates. Some of the enquiries in this genre offer international comparisons or focus on global phenomena. Because of their broad span, they have a tendency to homogenize their subject-matter and to filter out the uncomfortable exceptions that fail to match their generalizations.

An example can be found in the reference, earlier in this chapter, to ‘Mode 2 knowledge’, carrying the implication that traditional forms of knowledge generation are being phased out in favour of collective, applied transdisciplinary developments which take place mainly outside academia. Further reflection suggests, however, that such well-established areas of pure, monodisciplinary knowledge as anthropology, history, philosophy and the like are reasonably certain to survive under the assault of advanced technology. Even within scientific disciplines such as physics and biochemistry there remains considerable scepticism about the benefits gained from collaborative applied research compared with the serendipitous scientific discoveries that come from basic science (Henkel 2000: 201). Indeed one of the purposes of this book is to serve as a reminder of the diversity of knowledge

forms and their associated knowledge communities, and hence to question the widespread tendency to assimilate them to the large-scale and headline-winning developments whose main home is in the applied sciences (see Chapter 8).

In contrast to these large-scale, generalizing studies, one can identify another set of enquiries directed at the micro level which focus on individual academics and students. Investigations of teaching approaches and learning experiences commonly have a home here. Other relevant findings have been remarked on earlier; for example, that research has shown managerialist policies to have imposed new and less favourable working conditions, reduced the scope of individual discretion and generally tended to deskill the members of the academic profession. Diversification too – as noted – has had an impact on individuals' qualifications for employment and for their subsequent promotion.

Intermediate between these two categories – enquiries that concentrate on global issues and those which direct themselves to individual concerns – lies a further group of studies located at what may be termed the meso level. These embody a distinctive set of social and cognitive considerations relating to academic communities clustered around common intellectual interests. Such communities can be studied from a number of different perspectives. In this book they are examined from a cultural standpoint, which is in its turn related to the social and cognitive contexts in which they operate.

To lay claim to this as being the distinctive approach adopted in the chapters which follow is not of course by implication to invalidate the other levels of research activity to which we have referred. It is rather to offer another source of understanding of a highly complex whole. The simile put forward by Allison (1971) makes the point in a telling way: much as nets of varying mesh trawl for different kinds of fish, so spectacles with contrasting lenses show up different aspects of the same field of vision. As noted in a different context in Chapter 4, one has to allow for a trade-off between comprehensiveness and specificity, between a broad view and a scrutiny in depth; each approach has its own particular advantages and limitations.

One point about the perspective adopted in the rest of the book remains to be underlined here: namely that it illustrates the need to pay closer attention than is often given to the differences between disciplinary – and in some cases sub-disciplinary – groups. That need has been increasingly recognized in relation to a diversity of aspects of HE, serving to emphasize that both theoretical understandings and practical policies cannot be assumed to relate equally to all academic contexts.

A variety of exemplars can be cited: for instance in relation to disciplinary differences in undergraduate teaching and learning (Hativa and Marincovich 1995; Ylijoki 2000); conventions in postgraduate education (Becher *et al.* 1994; Parry 1997); relations between teaching and research (Neumann 1996; Smeby 1998); aspects of staff development (Trowler and Knight 1999); perceptions of quality issues (Kekäle 2000); the concept of

academic standards (Becher 1997); and approaches to departmental management (Kekäle 1998, 1999). In most cases, the identified contrasts between established cultural assumptions and practices can be seen to be overridden by uniform, undifferentiated policy requirements. In consequence such requirements can result in anomalous and insensitive impositions, which are liable to be tacitly, if not overtly, rejected by those called on to adopt them. A further development of this argument is to be found in Chapters 8 and 9.

Note

1. Scott (1998) usefully distinguishes internationalization from globalization. While the former is purposive and potentially more constrained geographically than the latter (being limited to Europe, for example), it is also more bounded in its scope. Globalization includes features that impact on all universities in multi-dimensional ways: for example environmental, conceptual and cultural.